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ISDA 2010
Agriculture and Food
Montpellier – France
28 June – 1st July 2010
Innovation and Sustainable Development
in Agriculture and Food
www.isda2010.net

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Abstract — This article presents the analysis and reflection on the part of the experience of implementation of agroforestry systems, an existing alternative of agriculture as a solution for self-support, generation income to the rural population and environment preservation. Experience in that trained universities students of graduation, in order to that these, attached with the researchers from different areas, take appropriate of knowledge and strategies for work with agroforestry systems, on second moment, enable the construction of that knowledge along to the subjects of rural settlements of agrarian reform. The methodology is based on progressive pedagogical liberating trend that aims to develop conscience of all the reality they live in the quest for transformation in the collective construction of knowledge. The stimulus is given to addressing the issues related to critical discussion of the process of knowledge and different goals of each group, with the possible outcomes generate processes of self-training, preparing proposals, making the group itself platforms motor for community and assuming the implementation, evaluation and feedback of the project prepared in case the deployment of Agroforestry Systems.

Key words : family farming, land reform settlement, agroforestry systems, university extension, participative methodology

Résumé — Cet article présente l'analyse et la réflexion de la part de l'expérience de la mise en œuvre de l'agroforesterie, l'agriculture alternative existante comme solution d'auto-support, générer des revenus pour la population rurale et préservation de l'environnement. Cet expérience dans lequel les étudiants seront capacité pour chercheurs de différents domaines, s'approprient des connaissances et des stratégies pour travailler avec des systèmes d'agroforesterie, pour un part et, d'autre part, de permettre la construction de ces connaissances avec les sujets les

établissements ruraux de la réforme agraire. La méthodologie est basée sur la libération progressive, tendance pédagogique qui vise à développer la conscience de toute la réalité qu'ils vivent dans la quête pour la transformation dans la construction collective du savoir. Le stimulus est donnée dan l'approche les questions liées à la discussion critique du processus de la connaissance et des différents objectifs de chaque groupe, avec les conséquences possibles de générer des processus d'auto-formation, la préparation des propositions, ce qui rend le groupe lui-même capable de moteur plates-formes pour la communauté et l'évaluation et la rétroaction du projet préparé par les systemes agroforesterie.

Mots clés : agriculture familiale, réforme agraire, systemes agroforesterie, extension universitaire, méthodologie participative

INTRODUCTION

This article presents the initial part of work with agroforestry systems, where enabled universities students of graduation, in order to that these, attached with the researchers from different areas, take ownership of knowledge and strategies for working with agroforestry systems, for in a second time, enable the construction of those knowledge along to the subjects of rural settlements of agrarian reform.
Rural Settlements are new agricultural production units formed by government policies aimed at the redevelopment of land use for the benefit of landless rural workers (BERGAMASCO & NORDER, 1996). Process that currently need to incorporate environmental matters, as there was, until then, concerns about environmental problems in the constitution of them, because the whole system of agricultural production, as technological as financially, is based on the idealization of that is conventionally called of modern agriculture, disregarding the production systems self sustainable, diversified and better suited to relatively small areas and using family labor.
Although some research shows that in policy of rural settlement is contained in the conventional model of agricultural exploitation, which ignores the knowledge of farmers, their history and culture - and technologically, there are difficulties in providing alternatives according to the local ecosystem - alternatives already exist and emphasize the diversity and potential sites by optimizing the use of natural resources without degradation (CARMO, 2003).
Optimizing the system, and not maximize it as it does to modern agriculture, is one of the goals of Agroforestry Systems, that has been an alternative perspective on agroecology are conceptualized as sequential arrangement of species or groups of herbaceous species, shrubs and trees, through which one seeks, over time, play a natural succession dynamics, aiming to meet human needs in a sustainable manner (VIVAN, 2000 and GÖTSCH, 1995).
Agroforestry Systems appear as an agricultural practice that allows think the issue of environmental preservation and intercropped it with crops or pastures that result in income generation. This is activity directed toward the Sustainable Rural Development, serving as an alternative land use in which the settlers held the preservation of nature and increase income through adding value and enables the use of areas where management conscious is allowed. His guidance is based on a systemic approach, making it essential to dynamic development of knowledge over time.

1. AGROFORESTRY SYSTEMS AND LAND REFORM SETTLERMENTS

The principles of agroforestry systems, as are known, they provide solutions, systematically, that cater to this new matrix proposal and were designed with the logic of the tropical world, or more specifically, based on the process of secondary succession of tropical forests .
Training for SAF's deployment in family farming denotes an educational nature, in which reality is what mediates the learning, becoming an object of knowledge of both (farmers, technicians).
Agroforestry Systems is a farming technique, in which is embedded the concept of system as an arrangement of agricultural inputs and environmental constraints such that they form an entity, a whole. They basically consist of a system of sustainable land management, which combines agricultural species simultaneously or sequentially in the same areas with practices compatible with traditional farming techniques of rural population (KING & CHANDLER, 1978). The emphasis on the reality of rural settlements on the interactions between settlers and productive resources available within of the settlement or a

predetermined geographic area and not just the products or rates of productivity achieved by farmers.
In the creation of settlements, they moved to the same technological standard of conventional farming, where there are concerns about the environmental issue, ignoring diverse production systems and sustainable. By working with agroforestry systems in settlements is possible to understand something that Whitaker (2003) puts it as just the most immediate and important of the settlement process: the reconstruction of nature (environmental issues) and the rebuilding of lives (cultural issues).
The agroforestry systems can respond to these two faces, its adoption responds to an environmental liability, recovering devastated areas, but involves a cultural issue, the relationship between humans and nature and between human beings themselves. Since the systems depart from the logic of taking nature as the basis for the local ecosystem, harmonizing procedures with the dynamics of agricultural site, it is not only the replacement of the external input. It involves understanding the ecosystem and its optimization in time and space as well as the interaction between living communities and media, which recognizes the importance of particularities and differences of human knowledge on different trajectories (which are characteristic of settler). It is noteworthy that even with these differences are organized in the struggle for land, and in common, the settlers want to continue this conquered land, thrive on their lots and have quality of life for themselves and future generations.

2. THE CAPACITY IN AGROFORESTRY SISTEMS AND YOUR METHODOLOGICAL IMPLICATIONS

The study was conducted in two stages: the first, which is being analyzed in this article, is the workshop to train graduate students in various fields of knowledge, this that had been held at the State University of Campinas, SP; the second will occur in its early settlers in the field with seating for 12 October.
In both stages of the work the methodology is based on tendency pedagogical liberating progressive that aims to take educators and students to achieve a level of conscience of the reality they live in the quest for transformation in the collective construction of knowledge. All the involved are subject to the same action if the work-Agroforestry Systems of participatory manner and context through discussion groups in which prevails the dialogue, leaving mainly the pre-existing knowledge of the participants involved.
The goal of this conception is to provoke and create conditions for it to develop an attitude of critical reflection, committed with the action. Initially, it starts the lifting of all knowledge and then there is a systematization of these articulated with the academic knowledge in order to clear, construct and reconstruct concepts. All this for the second time during the camp, be prepared and conducted workshops about agroforestry systems. The workshops have like goal, again, the exchange of knowledge among stakeholders aiming at the implementation and management of such systems in Agrarian Reform Settlements.
Workshop which means the place where has a letter and also, more importantly to our understanding, a place where they make big changes. In this sense, the workshop is an educational activity developed in three pedagogical moments.

2.1. First time: the initial questioning.

At this point were presented questions and or concerns for discussion with students of graduate with the goal of motivate the specific content for Agroforestry, linking that content with the real knowledge of each. This occurred in two senses, first had already given some idea about the questions, the result of their prior learning and presenting themselves as alternative conceptions, and second, the questioning allowed which the participants to feel

the necessity of acquire others knowledges. This second moment, the stance of educator-facilitator was to question and cast doubts than to answer and provide explanations.
The study was conducted in small groups of discussion, without the interference of the teacher-facilitator, and finally, the presentation of knowledge on the part of students of graduation, who are from different areas of knowledges: agricultural engineering, social sciences, architecture , biology, agronomy, philosophy.
Thus, if you had a set of knowledge on the subject discussed in three smaller groups and then presented to all workshop participants. Words have been raised that showed the group's knowledge about the principles for implementation of agroforestry systems and these are summarized in Table 1.

Table 1. Initial Problematization.

Group 1	Group 2	Group 3
Nutrient cycling	Value-added	Worldview
Use of soil	Planning	Ethics
Succession	Sustainability	Autochthonous
Reduction of pesticide use	Constant monitoring	Closed cycles
Reduction of external inputs	Food security	Biodiversity
independence		
Diversity of production = high	Observations of spaces	Local culture
income		
Biodiversity	Corridors ecological	Increase potential for complexity
Soil Protection	Cooperation	Redundancy species
Polyculture		Liberating education
One tree species (at least)		Resilience
		Respect
		Less pesticide
		Less fertilizer external
		Various extracts
		Food security

2.2. Second stage:

This step were developed definitions, concepts, relations about the theme of the workshop. The content was prepared and scheduled. At this time was the work of the facilitator, which in this case presented concepts already structured and scientifically validated about Agroforestry Systems. Follow, in Table 2, the summary of what was presented and discussed.
In the case of agroforestry systems in that moment was emphasized that the farmer and the technician (student) are considered experimenters, need to research local species, consortia, management, instruments that facilitate their work.

Table 2. Knowledge Organization.

The subjects
To observe and be open to learn with the nature;
Similarity in structure and function to the original ecosystem of the place;
Ecological succession;
Consortium of plants;
Diversity and density of the species in the system;
Complete system since the initial;
Land cover, the availability of nutrients and maintenance of soil life.

2.3. Third time: application of knowledge:

At this time we dealt with systematically the knowledge that is being built by the workshop for participants to analyze and interpret both the initial situations that led to his study, as situations that are not directly involved with the initial questioning.
Thus, there were several themes that emerged in the proposed dialogue, since concepts of production systems, specific systems, types of management and environmental policies. Focused on the principles that at the end of the workshop were the following formulation (Table 3).

Table 3.Principles of agroforestry systems.

The subjects
Reduction of independence from external inputs
Soil protection
Nutrient cycling
Polyculture
One tree species (at least)
Cooperation
Sustainability
Biodiversity
Respect
Liberating education
Ethics
Autochthonous
Worldview
Resilience
Local Culture

The words were listed in the questioning in each of the three groups, but after the organization of the knowledge neither all words in Table 1 could be considered as principles, being a finding of whole group.
Finally, groups were asked drawings, in which it was possible to visualize what are the Agroforestry Systems as follow in Figure 1 and Figure 2.

Figure 1. Detail of design of agroforestry systems.

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Figure 2: Detail of design of agroforestry systems.

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During the workshop it is important to emphasize that the key is the understanding that when it comes to agroforestry systems, are the principles that govern such systems and these will guide the practice, because there are not revenues to be spent, models to be replicated but local solutions to the design and construction of the same.

3. CONCLUSION

The issue of Agroforestry Systems, being worked in order to stimulate a critical approach in the process of knowledge and the recognition of different views and goals of each group, obtained satisfactory results to the generation of transforming processes in the group as a whole. Changes were recorded in the training of graduate students, putting them in touch with the reality of the Brazilian countryside, where it is necessary to rethink the knowledge gained in academic so they can achieve the needs of family farmers. This means adding a new profile for future professionals, conscious of its social responsibility and its transformative role, also result from contact with another way of doing agriculture, questioning look at the environmental issues, cultural and social development of every farmer, every situation and region. All this is possible with the presence of the technique of Agroforestry Systems, which represents an important alternative to agricultural production with low environmental impact, and can ensure local development and exploitation of knowledge.

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